

REMARKS

Claims 1-20 are pending in this application. Claims 1-3, 5-7, 9, and 11-18 stand rejected and claims 4 and 8 are objected to. Applicants wishes to thank the Examiner for the indication of allowable subject matter in claims 4 and 8. By this Amendment, claims 19 and 20 have been added. In light of the amendments and remarks set forth below, Applicants respectfully submits that each of the pending claims is in immediate condition for allowance.

Claims 1-9, 11-14, and 16-18 are objected to by the Examiner for including reference designators. Applicants have amended the claims to replace the letter designators in the claims with designators such as "first node", "second node", and the like. Therefore, Applicants respectfully request reconsideration and withdrawal of the objection.

Claims 11, 12, and 16 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicants respectfully request reconsideration and withdrawal of this rejection. With respect to claim 16, the Examiner objects to "all output ports accessible from I_A being accessible from output O_D ." The Examiner references Figures 6b and 6c asserting, to the best of Applicants' understanding, the output from node C can never reach node H when the output port is connected to node D. Applicants respectfully disagree.

Figure 6a shows that node C connects to both nodes D and H. Further, Figure 6b shows that node C can route messages MA and MB to either one of nodes D or H. Either of the output ports of node C can connect with either of the nodes D and H. In other words, any input of node C can be routed to any output of node D. Thus, Applicants respectfully request reconsideration and withdrawal of this rejection.

Claims 17 and 18 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully request reconsideration and withdrawal of this rejection. Applicants have amended claim 17 in light of the Examiner's rejection such that both the first and second message are routed to output ports.

Claims 1-3, 5-7, and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,272,141 ("Reed")¹. Applicants respectfully traverse this rejection.

Among the limitations of each of Applicants' independent claims not present in the cited reference is that "at least one of the plurality of nodes is adapted to simultaneously receive the plurality of messages." The present specification discloses an interconnect structure having nodes with an arrangement of control lines. The disclosed control lines from the nodes increase the throughput of the disclosed interconnect structure.

In Reed, each of the control lines is present so that each node receives only one message at a time. However, as explicitly recited in the present application, control lines are presented in a manner that allows a node to receive a plurality of messages simultaneously. The ability for a node to simultaneously receive the plurality of

¹ "[I]t is well settled that the applicant's own prior work will not anticipate his later invention unless that prior work is such as to constitute a statutory bar under § 102(b)." 1 Donald S. Chisum, Chisum on Patents § 3.08[2], at 3-151 (1999) (citing Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1581 n. 47 (Fed.Cir.1987)). Purdue Pharma L.P. v. Boehringer Ingelheim GmbH, 98 F.Supp.2d 362(S.D.N.Y. 2000) aff'd 237 F.3d 1359 (Fed. Cir. 2001). In re DeBaun, 687 F.2d 459 (Cust. & Pat.App. 1982) (an applicant's own work, even though publicly disclosed prior to his application, may not be used against him as a reference, absent the existence of a time bar to his application.)

As a general principal, an inventor's own prior original work cannot be cited as part of the prior art to show that his later invention is obvious under Section 103. See, e.g., In re Pleuddemann, 910 F.2d 823 (Fed. Cir. 1990); In re Fout, 675 F.2d 297, 300 (C.C.P.A. 1982) (absent a statutory bar under 35 U.S.C. §§ 102(b), (c) or (d) an applicant's own invention cannot be prior art to him).

messages serves to increase throughput. Reed explicitly prevents receiving multiple message data at each node. In fact, in Reed, only one message is received at a time and thus data contention is prevented. In contrast, according to Applicants' explicitly recited claim limitation, each of Applicants' independent claims explicitly recites that at least one node is capable of receiving a plurality of messages. Therefore, Applicants respectfully submit that the pending claims are allowable over the Reed reference.

Further, to establish a prima facie case of obviousness, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference to arrive at the claimed subject matter. The prior art reference must teach or suggest all the limitations of the claim in question. See MPEP § 706.02(j).

Reed does not teach or suggest the invention as recited in Applicants' independent claims. With respect to independent claim 1, as noted in the Office Action, Reed lacks (i) "the first node having a plurality of data input ports, a plurality of data output ports, and a control signal input port;" and (ii) a "the second node having a plurality of data input ports, a plurality of data output ports, and a control signal output port."

Although the Examiner admits that Reed fails to disclose the above recited limitations, he argues that one of ordinary skill in the art would be motivated to modify Reed. The Examiner reasoned that:

It would have been obvious to one of ordinary skill in the art the time of invention to include the plurality of input and output ports and control signal output port with the nodes for the purpose of sending control information about message transmissions to other nodes in the interconnect. The motivation for sending control information to other nodes about message data is so that each node receives only one message at a time and thus preventing data contention.

(Reed, column 8, lines 63-65. Office Action at 6.)

In Reed, the control lines are present so that each node receives only a single message at any given time. As such, there would be no reason to modify Reed so that simultaneous messages can be received at a node. In fact, this would eliminate the usefulness of Reed in that in Reed, message collisions are prevented by control lines allowing only a single message to reach each node.

In contrast, as taught in the present application and recited in the pending claims, at least one node is capable of receiving a plurality of messages. If a plurality of messages is received at a given node in Reed, the messages would collide and the system would fail. In contrast, according to the present claims, a plurality of messages can simultaneously enter a node and be processed without collision. Therefore, Applicants respectfully assert that one would not be motivated to modify the pending claims as set forth in the Office Action.

For each of the reasons described above, Applicant respectfully submits that Reed does not teach or suggest the structure as recited in the independent claims and withdrawal of the rejection on the basis of Reed is respectfully requested.

Applicant has responded to all of the rejections and objections recited in the Office Action. Reconsideration and a Notice of Allowance for all of the pending claims are therefore respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Application No.: 09/692,073

Docket No.: I2455.0009

If the Examiner believes an interview would be of assistance, the Examiner is welcome to contact the undersigned at the number listed below.

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Respectfully submitted,

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Dated: July 5, 2005

Signature: 

(Keith D. Nowak)